

Flight Scientist Report  
Tuesday 01/11/2022 ACTIVATE RF101

Flight Type: Statistical Survey Flight  
Flight Route: ATLIC ZIBUT 3700N07130W 3545N06945W 3700N07130W ZIBUT ATLIC  
Special Notes: Second of two flights on this excellent CAO day.

**King Air**

Pilot report (Coldsnow):

Flight planned route included KLF, ATLIC, ZIBUT, 3656N/07136W, 3518N/070W, 3656N/07135W, ZIBUT, ATLIC, KLF. Weather at takeoff SKC, winds 020 11. Departure uneventful. Six dropsondes released throughout the flight (one repeat at 3656N/07136W due to no GPS). Winds were generally out of the W-NW 70-90 knots. No issues observed with instrumentation and timing was within 10 min of NASA 524 at all times.

Flight scientist report (Harper):

Takeoff: 18:34:14utc

Cloud conditions:

No cirrus

Clear conditions down to cloud layer.

B200/HU25 coordination:

Outbound Leg: B200 ahead by 5min until southeast turn. Increasing to 7 to 8 min during southeast leg.

Inbound Leg: B200 ahead. by 3min for northwest return leg. Coincident at inbound turn. B200 5min behind approaching ATLIC

Sonde 1: 19:18:30utc at ZIBUT

Sonde 2: 19:29:55utc at outbound turn

Sonde 3: 19:37:51utc at approx 1/3 distance between turn point and endpoint of southeast outbound leg

Sonde 4: 19:48:08utc at approx 2/3 distance between turn point and endpoint of southeast leg

Sonde 5: 20:00:05utc at turnaround point. NO GPS

Sonde 6: 20:02:50utc after turnaround point.

Sonde 7: near shore just after ATLIC.

Landing: 22:08utc

HSRL2 instrument status: No issues except manual tuning of Interferometer due to known seed laser issue. Was able to maintain good contrast ratio throughout flight.

RSP status: No issues.

AVAPS status: No issues. One bad sonde drop without GPS lock

Satcom: Good comm thru flight.

Nadir camera: inop for this flight.

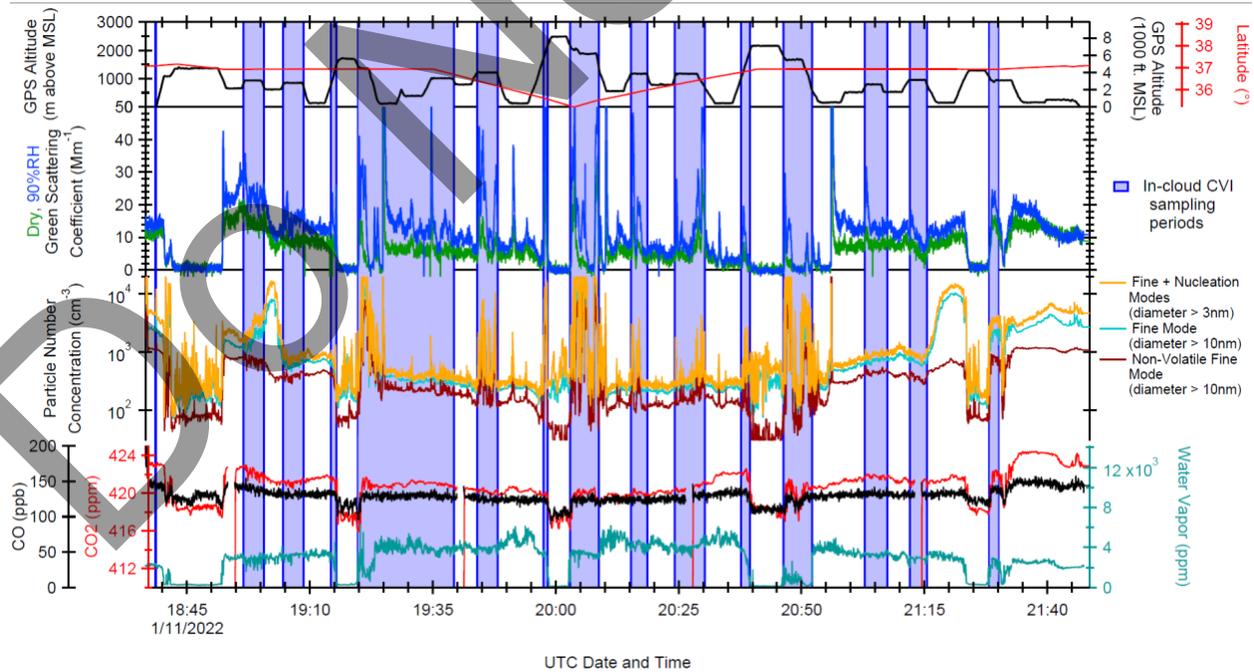
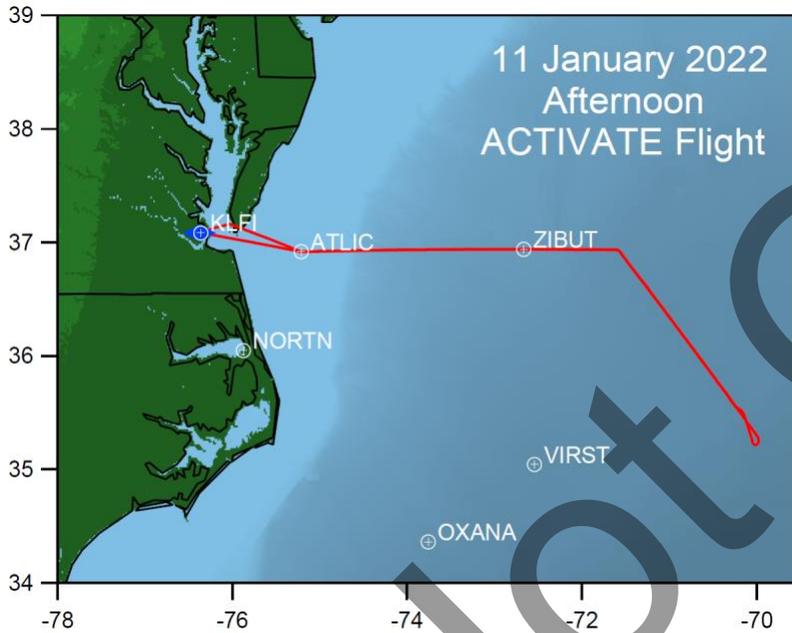
### **Falcon**

Pilot report (Baxley):

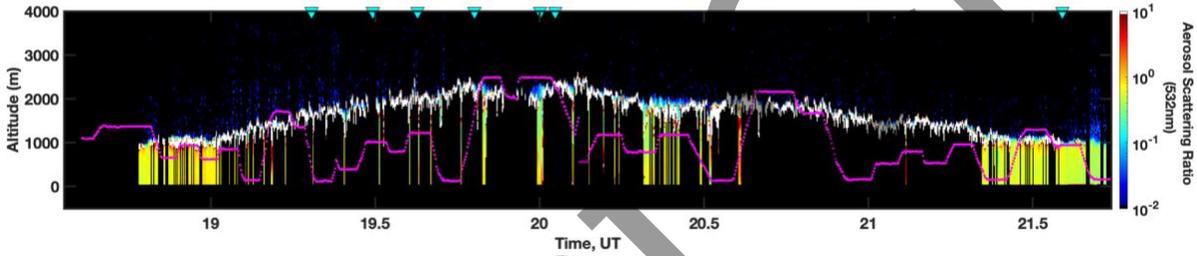
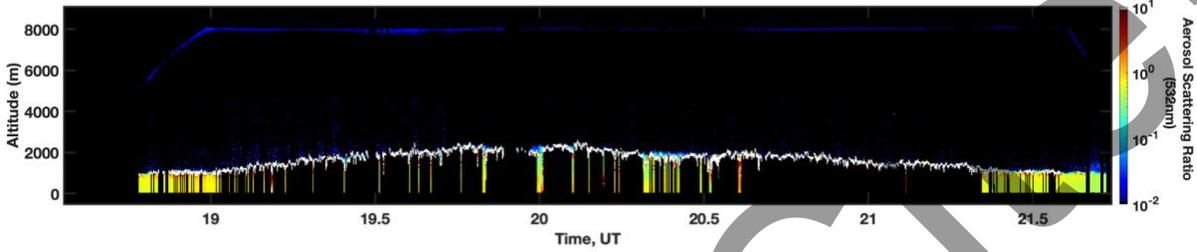
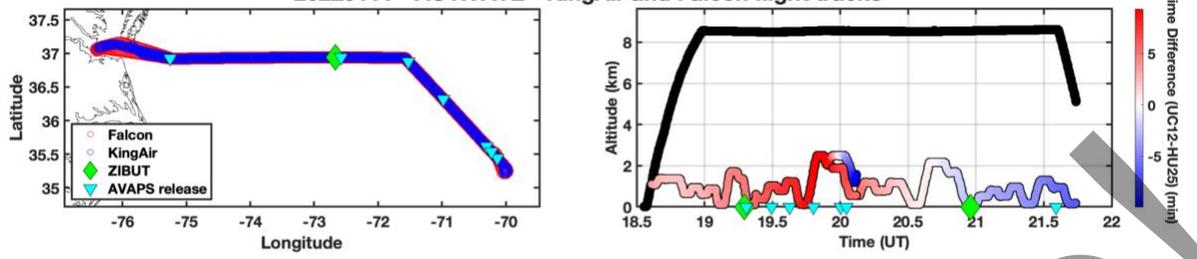
KLFI-ATLIC-ZIBUT-N3656W07135-N3518W07000-N3656W07135-ZIBUT-ATLIC-KLFI Slover, Baxley, Crosbie, Winstead 15 minute late takeoff due to airport congestion. Mission flown as planned and weather as expected. HU25 and B200 were within 10 minutes of each other entire flight. Auto pilot performed better and was usually available.

### Flight scientist report (Crosbie):

4 Cloudy Modules. Flew out the ZIBUT corridor to link up with the morning's flight track and extend further to the southeast. Similar conditions to the morning were observed but icing conditions were somewhat more significant although this may have just been a result of the module timing bias. Several additional MINALT legs were needed to clear icing. On the return leg, the TAT suffered a failure that may have been linked to icing although the failure was initially intermittent and did not simply correlate with time in cloud.



### 20220111 - ACTIVATE - KingAir and Falcon flight tracks

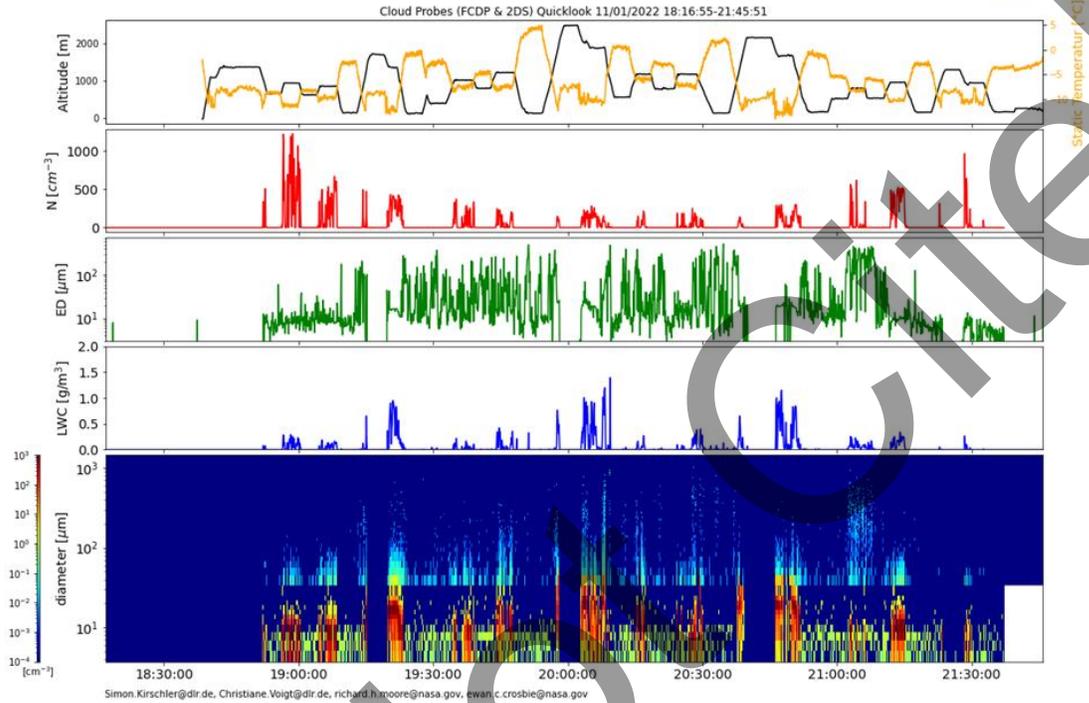


DO NOT

# Quicklook ACTIVATE Cloud Probes (FCDP & 2DS) Quicklook

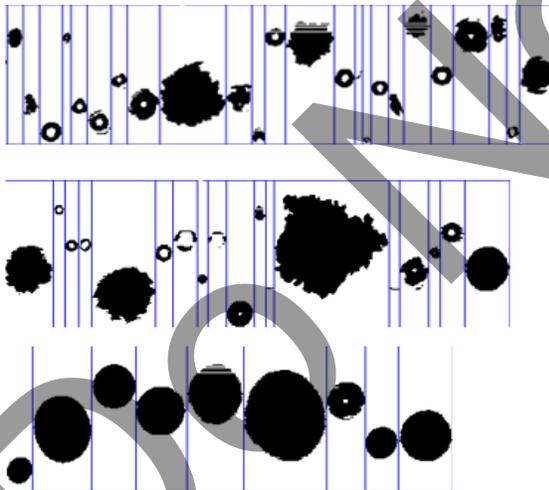
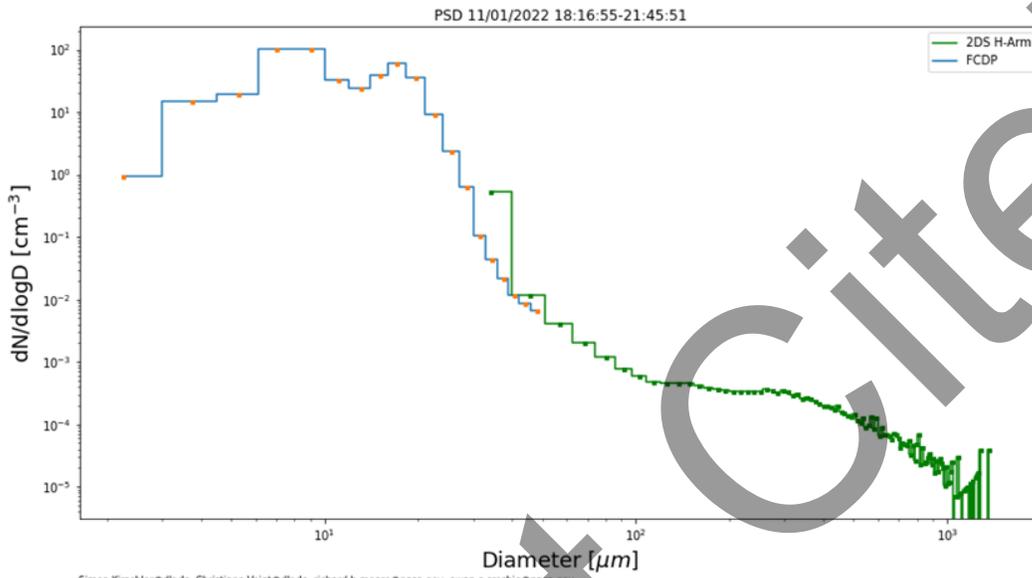
preliminary data, only for quicklook use

Simon Kirschler, Christiane Voigt, Richard Moore, Ewan Crosbie



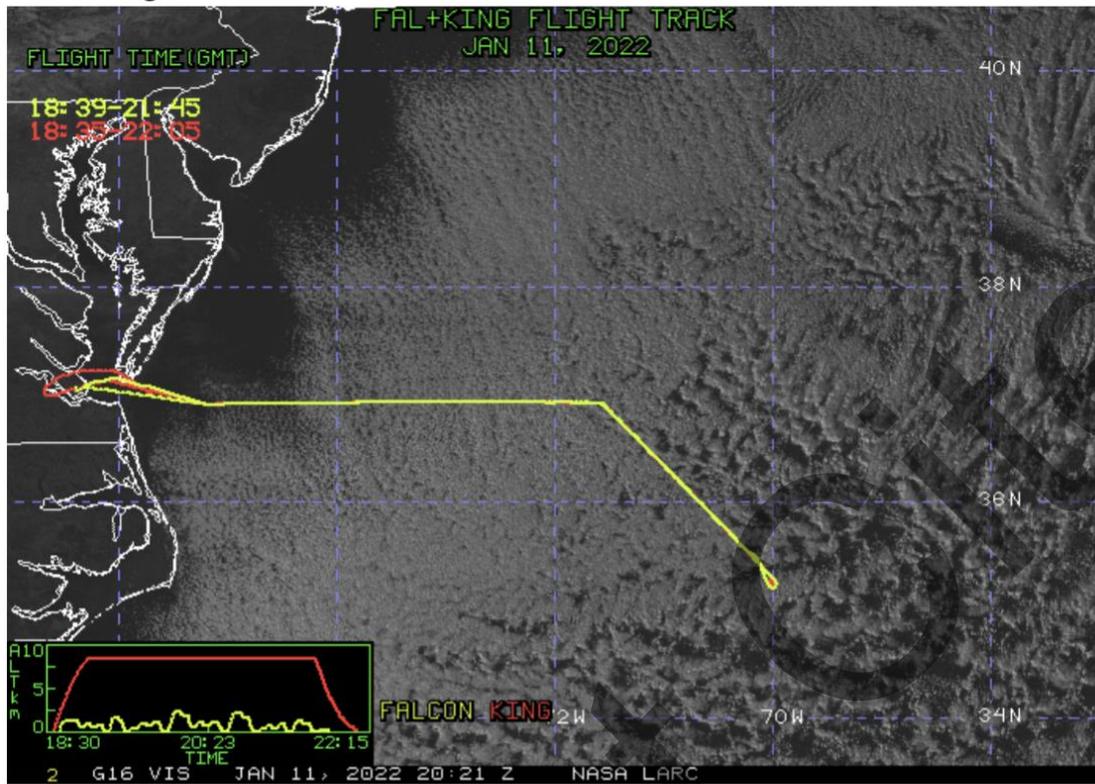
# PSD ACTIVATE

preliminary data, only for quicklook use  
Simon Kirschler, Christiane Voigt, Richard Moore, Ewan Crosbie



Mixed phase clouds with ice and liquid precip.

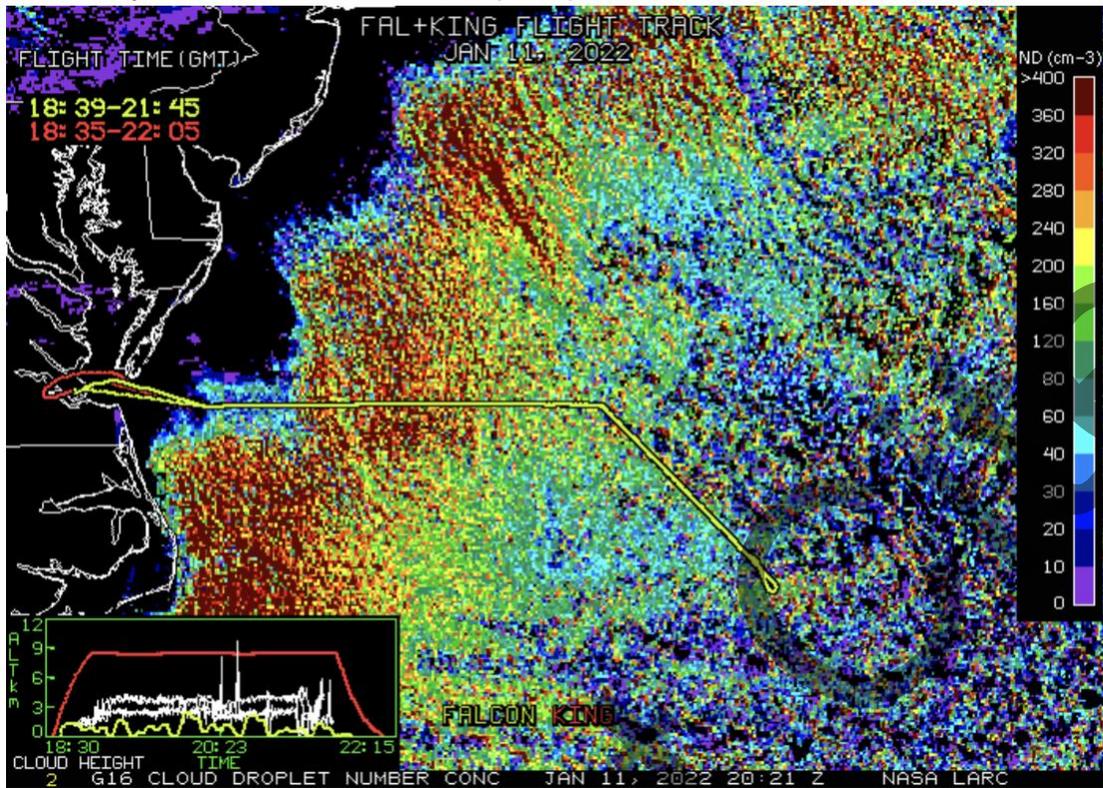
Visible Image



Cloud Phase



Cloud Droplet Number Concentration (cm-3)



Cloud-Top Height (Kft-ASL)

